



Teaching Ophthalmology in Medicine with Empathy and Immersion

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Abstract:

As part of an Inspired Learning Initiative project in Adult health 2 (Phase2 medicine) a big scale Virtual Reality immersive Ophthalmology tutorial was developed. This innovative teaching method, using *eXtended Reality Learning Object* (XR-LO) was developed thanks to a collaboration between Ophthalmologists from the Department of Ophthalmology POW Hospital as well as educational & Immersive Technologies developers from PVCE.

The aim was to improve ophthalmology teaching, an important subspecialty for the general doctor, that has faced decreasing teaching allocation over the last decade with resulting lack of confidence reported by Senior Medical students and Junior doctors.

This 90- minute tutorial, which runs once a term for ~40 students, uses self-experience to enable empathy-based learning via the virtual reality experiences of patients suffering from different eye diseases. During the first part of the class students are guided through the patient experience of the most common eye diseases using progressive severity scales and interactive discussion relating symptomatology to pathophysiology and management. During the second part the students are encouraged to self-explore the different symptoms.

The pedagogical application of this new way of teaching was carefully designed using evidenced-based data and clinical ophthalmological expertise and was one of the first examples of VR immersion with specific learning outcomes used for large-scale teaching in Australia.

We will present some preliminary outcomes and student feedback based on the internal PULTS survey and a virtual presence questionnaire (Witmer et al 2005) that were used to improve and update the tutorial. In 2019 we are hoping to formally study learning outcomes, virtual presence as well as the experimental set up and digital analytics to evaluate and publish the learning outcomes of the tool.